Montana Laboratory Sentinel

Updates from the MT Laboratory Services Bureau http://healthlab.hhs.mt.gov/ 05/12/10

Cryptococcus gattii - Potentially lethal, tropical fungus establishing in the Pacific NW

The Los Angeles Times (4/23, Maugh) reported, "A potentially lethal fungus normally found only in the tropics has established a foothold on the Pacific Coast of British Columbia and has slowly made its way southward into Washington, Oregon, and Idaho," according to a team of international researchers led by a Duke scientist. The "fungus in question is called *Cryptococcus gattii*," and the genetically different strain "seems to infect primarily healthy people" who inhale the spores. "The primary symptoms include prolonged coughing, night sweats, pneumonia, and weight loss over a period of weeks," although "meningitis can occur." Notably, "five of the 21 people who contracted the fungus in the US have died (about 25%), compared with 8.7% of the 218 infected people in Canada."

The fungus has also infected sheep, cats, and dogs, according to Reuters (4/23). The authors of the study appearing in PLoS Pathogens warned, "Based on this historical trajectory of expansion, the outbreak may continue to expand into the neighboring region of Northern California, and possibly further."

Cryptococcus gattii is a fungus closely related to *C. neoformans* that can infect the pulmonary and central nervous systems of both animals and humans. Unlike *C. neoformans* which primarily affects immunocompromised persons, *C. gattii* usually causes disease in immunocompetent persons.

Suspect *C. gatti* in individuals with atypical pneumonia or fungal meningitis who live or travel in areas where *C. gattii* is found. Cryptococcal infections may be diagnosed by microscopic examination or culture of tissue or body fluids such as blood, CSF or sputum. Rapid antigen tests can be performed on blood and CSF. **When Cryptococcus is identified in a respiratory specimen or cerebral spinal fluid, do not assume that it is *C. neoformans* – additional testing is required for speciation.**

Please call the Montana Public Health Laboratory at 800-821-7284 for more information.

CDC confirms 11th case of vancomycin resistant *Staphylococcus aureus* (VRSA)

infection since 2002 in the United States. This serves as a reminder about the important role of clinical laboratories in the diagnosis of VRSA cases to ensure prompt recognition, isolation, and management by infection control personnel. This is an important opportunity for all laboratories to revisit their step-by-step problem-solving procedure or algorithm for detecting VRSA that is specific for their laboratory. A sample algorithm is available at http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_algo.html and highlights the recommended testing methodologies for detecting VRSA and actions based on testing results.

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New Information on Laboratory Services Bureau Website:

Packing & Shipping Guidelines - Infectious Substances:

- Packing & Shipping Guidelines for Infectious Substances (ASM 2008)

Laboratory Information for Bioterrorism Emergencies:

- Bioterrorism Emergencies http://www.bt.cdc.gov/bioterrorism/lab.asp

Testing & Presumptive Agent Identification

- Sentinel (formerly Level A) procedures **(UPDATED INFORMATION)** http://www.asm.org/index.php?option=com_content&view=article&id=6342&Itemid=639

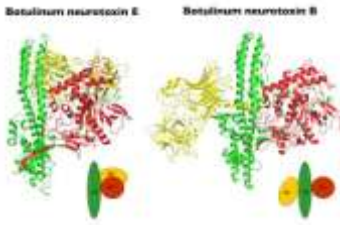
Fact Sheets on Specific Bioterrorism Agents

- (Anthrax, Botulism, Brucellosis, Plague, Smallpox, Tularemia, Viral Hemorrhagic Fevers) http://www.bt.cdc.gov/bioterrorism/factsheets.asp

Bioterrorism Preparedness Training for LRN Sentinel Laboratories

- BT Wet Workshop - July 30, 2010 - Helena MT
  One-day presentation and laboratory observation of *Bacillus anthracis, Brucella spp., Yersinia pestis, Francisella tularensis, Burkholderia* spp. and other agents. Laboratory Response Network protocols and other emergency preparedness issues will be discussed. Limit: 20 microbiologists kmartinka@mt.gov
- On-line courses http://www.aphl.org/courses/pages/bttrain.aspx

New Heptavalent Botulinum Antitoxin (H-BAT)



CDC has announced the availability of a new heptavalent botulinum antitoxin (HBAT, Cangene Corporation) through a CDC-sponsored Food and Drug Administration (FDA) Investigational New Drug (IND) protocol. HBAT replaces a licensed bivalent botulinum antitoxin AB and an investigational monovalent botulinum antitoxin E (BAT-AB and BAT-E, Sanofi Pasteur) with expiration of these products on March 12, 2010. As of March 13, 2010, HBAT became the only botulinum antitoxin available in the United States for naturally occurring non-infant botulism.

Please call the CDEpi program for assistance and consultation on all suspected botulism cases 406.444.0273 24/7/365. For more information on H-BAT: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5910a4.htm.

Montana Public Health Prevention Opportunities Under The Big Sky

Montana, The Last Best Place, is unfortunately also last in the country in childhood immunization

The April 2010 issue of the Montana Public Health Newsletter has been posted and can be found at the below link.

http://www.dphhs.mt.gov/PHSD/prevention_ opps/MT-PH-prevent-opps-newsletters.shtml

Past issues of the newsletter (2006-2010) are available at the above link

CDC Reminds Clinical Laboratories & Healthcare Infection Preventionists of their Role in the Search & Containment of Vancomycin-Resistant Staphylococcus aureus (VRSA)

The Centers for Disease Control and Prevention (CDC) has recently confirmed the 11th case of vancomycin resistant *Staphylococcus aureus* (VRSA) infection since 2002 in the United States. This serves as a reminder about the important role of clinical laboratories in the diagnosis of VRSA cases to ensure prompt recognition, isolation, and management by infection control personnel. This is an important opportunity for all laboratories to revisit their step-by-step problem-solving procedure or algorithm for detecting VRSA that is specific for their laboratory. A sample algorithm is available at http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_algo.html and highlights the recommended testing methodologies for detecting VRSA and actions based on testing results.

Furthermore, because of exchange of genetic material from vancomycin-resistant enterococci (VRE) to methicillin-resistant *Staphylococcus aureus* (MRSA) in the emergence of VRSA, CDC is asking clinical laboratories, when patients are identified with suspected or confirmed VRSA, to ensure that all VRE, MRSA, and VRSA isolates from these patients are saved. Following confirmation of VRSA, CDC recommends that all three isolate types (i.e., VRE, MRSA, and VRSA) be shared with public health partners, including CDC.

Immediately, while performing confirmatory susceptibility tests, notify the patient's primary caregiver, patient-care personnel, and infection-control personnel regarding the presumptive identification of VRSA so that appropriate infection control precautions can be initiated promptly. It is also important to notify local and state public health departments.

Coordination with public health authorities is critical. CDC has issued specific infection control recommendations intended to reduce the transmission of VRSA. However, these may need to be customized to the healthcare settings (e.g., dialysis, home healthcare). Infection control precautions should remain in place until a defined endpoint has been determined in consultation with public health authorities.

VRSA infection continues to be a rare occurrence. A few existing factors seem to predispose case patients to VRSA infection, including:

- Prior MRSA and enterococcal infections or colonization
- Underlying conditions (such as chronic skin ulcers and diabetes)
- Previous treatment with vancomycin

Appropriate antimicrobial prescribing by healthcare providers, adherence to recommended infection control guidelines, and, ultimately, the control of both MRSA and VRE are necessary to prevent further emergence of VRSA strains.

- For frequently asked questions on laboratory testing on VRSA: http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_labFAQ.html
- Link to "Recommendations for Preventing the Spread of Vancomycin Resistance Recommendations of the Hospital Infection Control Practices Advisory Committee (HICPAC)" or MDRO Guideline
- For assistance contact CDC's Division of Healthcare Quality Promotion by telephone 800-893-0485.
- For additional resources visit: http://www.cdc.gov/ncidod/dhqp/